

Date: Wed, 26 Oct 94 04:30:20 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: List
Subject: Ham-Ant Digest V94 #356
To: Ham-Ant

Ham-Ant Digest Wed, 26 Oct 94 Volume 94 : Issue 356

Today's Topics:

 ACURATE ROTATORS ???
 double delta loop on 2 meters
 Needed: J-pole measurements
 Phased array antennas
 Racal Radio's
 Re : double delta loop on 2 meters
 what IS a bevrage antenna?
 where do I go for local antenna laws

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 24 Oct 1994 22:36:46 GMT
From: mack@ncifcrf.gov (Joe Mack)
Subject: ACURATE ROTATORS ???

In article <itbkl.27.782544661@puknet.puk.ac.za> itbkl@puknet.puk.ac.za (Keith
Laaks) writes:

>HI.

>

>I habve started to experiment with Moonbounce (EME).

>Currently I am using only a single long yagi without a rotator.

>I am planning to put up an additional 3 long yagi's and am looking for

>a rotator that is capable of rotating quite a large array (each yagi is 7
>meters long) in both azimuth and elevation.

>

>I read somewhere that most of the 'commercial' rotators is not capable of

>rotating with an acceptable accuracy for EME. Apparently you need the
>rotator to be able to rotate to within 0.5 or 0.25 of a degree (in both
>planes).

The theory is that drop off is about 1db /deg misalignement so to justify
that low noise front end which shaved off 0.1db, you should also point your
antennas with equivalent accuracy.

>
>Does anybody know of a rotator that can do this?
>Do you perhaps know of someone doing EME and what is he using for rotation?

If you are following an analogue output (eg voltage from a variable resistor
that has a weight hanging off the shaft, to get elevation) with an 8 bit
DAC, you can only resolve 256 positions. In 90 deg elevation that is
about 1/4 degree. If you are using the same system for azimuth you'll only
get 1 degree resolution. Most pots aren't any more linear than that.

So what they're talking about is what the best of them can get,
after a lot of trouble.

For what you are doing, I would point it at the moon as best you
can and look for the big guns. That 's what I did last year and got
W5UN.

Joe Mack
NA3T

.

>
>All info is welcomed.
>
>73's
>Keith (ZS6TW)

>
> Potch Univ. Email : Tel:
> Potchefstroom itbkl@puknet.puk.ac.za Voice (0148) 992126
> West Transvaal FAX (0148) 992799
> South Africa
>
>

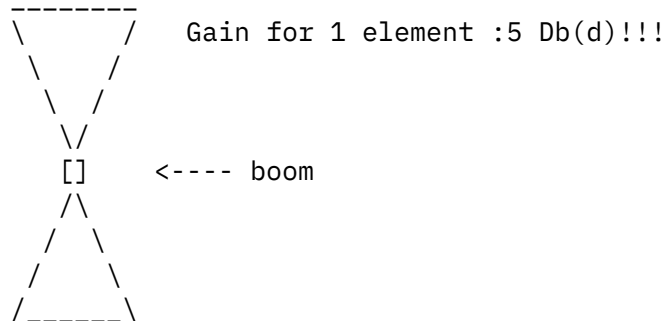
Date: 25 Oct 1994 15:57:39 GMT
From: ftronel@ens-lyon.fr (Frederic Tronel)
Subject: double delta loop on 2 meters

I've built a double delta loop antenna ,after I've read an article on a french review.

The original text has been written by G4ZU Dick.

Here's a description of the antenna :

(one element)



According the author :

.On the 10 meters band with 2*2 elements :

(Computered) Gain : 10 Db(d)

Widthband : 1 Mhz

My own experience :

.On the the 2 meters band with 2*6 elements :

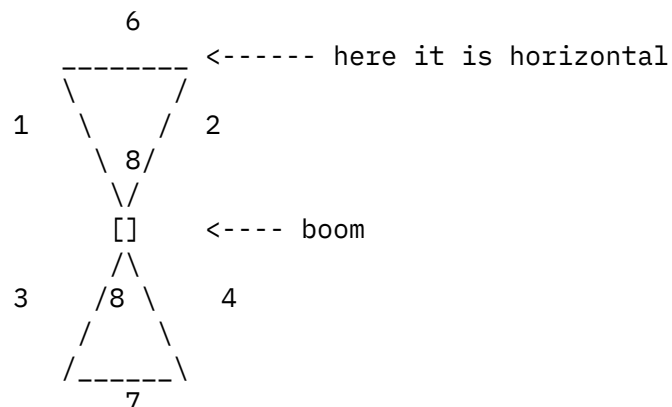
Widthband : 3~4 Mhz (TOS < 1.5)

Tos center of the band : 1~1.1

Important gain

Fed by two gamma match with 2 capacitors.

.polarisation depends of the position of the wire part of the antenna
i.e :



Obviously we have 1=2=3=4 and 7=6
and 8 is an angle

.measures:

.between elements 0.2 lambda (wave length)

.radiator :

.1=0.34 lambda

.6=0.32 lambda

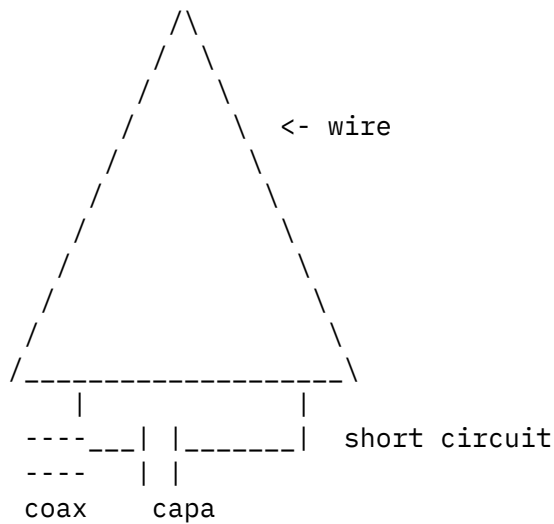
.angle 8 =56 degrees (theoretically) ,in practice 70 degrees will be better, in order to stretch the wire part of antenna (I hope it's clear)

.reflector : +5% applied to the measures of the radiator

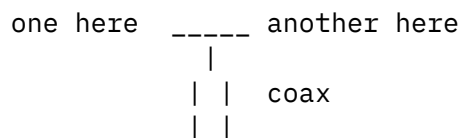
.directors : -5% applied to the measures of the last director

.feeding : 2 gammas match with 2 capacitors placed on (1 and 3) or (2 and 4).

One gamma match is done like this :



This figure is done for a simple delta loop ,in the case of a double delta loop, you two gammas :



For capacitors 10 pF are a maximum ,but they have to be equals.

If you have informations about such antenna ,or if you want further info ,my mail:

ftronel@ens.ens-lyon.fr

73's from F1SDZ (Fred)

Date: Tue, 25 Oct 1994 13:28:55 GMT
From: roberson@HDFS3.UCSD.EDU (Brad Roberson)
Subject: Needed: J-pole measurements

A couple years ago I found an article for a J-pole made of 1/2 inch copper water tubing. The article had the equations for spacings, lengths, and antenna wire placement. If someone could post those measurements I would appreciate it very much.

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*-----*           Applied Computing Devices, Inc.           _**_  
| RESCUE  |_*_           BRAD A. ROERSON           IIIIIIIII-|____\  
|   95   |---\_|           roberson@acd4.acd.com           /-----| 91  |<  
=(0)----- (0)-' Honey Creek Volunteer Fire Department  +-(0)----- (0)-+
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Date: 25 Oct 1994 06:08:06 GMT
From: garyk9gs@solaria.mil.wi.us (Gary T. Schwartz)
Subject: Phased array antennas

Jeff Cauhape (cauhape@twg.com) wrote:
: Hi,

: Can anyone recommend an intro text on phased array
: antenna design? Any help would be appreciated.

: Jeff Cauhape KB6TDU.

Hi Jeff, I would recommend getting ON4UN's book: "Low-Band DXing" 2nd edition. It has a lot of info plus many references to Ham Radio, QST articles. Good luck and let us know what you end up building!

P.S. The book is available from most dealers and I think the ARRL.

73 Gary
K9GS

garyk9gs@solaria.sol.net

Date: 24 Oct 1994 23:23:02 -0400
From: sean1916@aol.com (Sean1916)
Subject: Racal Radio's

In article <38cqbe\$q81@mango.aloha.com>, corrigan@aloha.com () writes:

Are you interested in selling this radio? if so e-mail me.

Date: 25 Oct 1994 09:05:12 GMT
From: moritz@ipers1.e-technik.uni-stuttgart.de ()
Subject: Re : double delta loop on 2 meters

Fred,

Since you are reposting this design, some criticism is called for:

1: Although the boom is really short, the elements require a total of about 24 meters of stiff alumininum material, which will not be cheap unless you are fortunate in knowing the right source.

2: It is a homogeneous array, (dimensions and separations of directors are all equal). From homogeneous Yagis it is known that the gain tends to saturate, and all new and optimized designs therefore are inhomogeneous.

3: Although the gain of the 2 ele double delta loop is substantial, I would strongly recomend not to build such a major antenna project as the 6 ele version, unless accurate gain figures are known. May be someone with NEC 2 experience can help there.

73, Moritz DL5UH

Disclaimer: The above said does not intend to raise any
political, religious ore ethnic issues.

Date: 24 Oct 1994 19:23:33 -0400
From: c002@ns3.CC.Lehigh.EDU (David M. Roseman)
Subject: what IS a bevrage antenna?

what IS a beverage antenna anyway? and what is it comprized of? LEDs?!

thanks

David

David Roseman	c002@lehigh.edu
SysOp of NODE 3 BBS	The Flying HAm - BBS
Running OBV/2 Software	KBR-9318 - CB
	N3SQE/SVARC - Ham
HAmmy in IRC	N3SQE@N3IQD.FN20GO.PA.USA.NA - Packet

Date: 25 Oct 1994 04:14:25 GMT
From: little@iamu.chi.dec.com (Todd Little)
Subject: where do I go for local antenna laws

In article <1994Oct24.115914.9504@ned.cray.com>, demers@labman.cray.com (Larry DeMers) writes:

|>In article <jeffp.782736625@access3> jeffp@access3.digex.net (Jeff Poretsky) writes:

|>>Hoping for some help:

|>>

|>>I Don't want to deal with a runaround with my community.

|>>Which Municipal office do I contact to find out about antenna

|>>laws?

|>>

|>>

|>>Thanks

|>>

|>>n2top

|>

|>Contact your local zoning office. They should have the info.

You should also check with the inspection services department or whatever the name of the department that deals with building codes enforcement. Some communities cover antenna restrictions (or at least requirements) under their building codes in addition to their zoning codes. Aren't bureaucrats wonderful?

73,
Todd
N9MWB

End of Ham-Ant Digest V94 #356
